

ABSTRACT

On the basis of at least a difference between a  
desired state amount related to a posture of a robot 1  
5 about a vertical axis or a floor surface normal line axis  
and an actual state amount of the robot 1 and a  
permissible range of a restriction object amount, namely,  
a vertical component of a floor reaction force moment or a  
component of the floor reaction force moment in a floor  
10 surface normal line direction to be applied to the robot 1,  
instantaneous values of a desired motion and a desired  
floor reaction force are determined such that a difference  
between a floor reaction force moment balancing with the  
desired motion on a dynamic model and a floor reaction  
15 force moment of the desired floor reaction force  
approximates the aforesaid difference to zero, while  
having the restriction object amount, which is associated  
with the desired floor reaction force, fall within the  
permissible range.